



HF Happenings 539

January 2013

South African Radio League * Suid-Afrikaanse Radioliga Member Society of the International Amateur Radio Union since 1925 www.sarl.org.za www.iaru.org www.iaru-r1.org

PEARS National VHF/UHF Contest, 16:00 UTC 18 January to 12:00 UTC 19 January and 12:01 UTC 19 January to 10:00 UTC 20 January

SARL Summer QRP Contest 1200 - 15:00 UTC 26 January

SARL to Focus on Disaster Communication Centenary

In his New Year message the SARL President, Rassie Erasmus, ZS1YT, said that for the next four months the SARL would focus on celebrating the theme "Amateur Radio - entering its second century of disaster communication."

He said, "In my Christmas message I focused on Ham spirit and the Amateur Code and likened it to the spirit of Ubuntu - that profound African sense that we are human only through the humanity of other human beings. Nelson Mandela once said that it is not a parochial phenomenon, but it has added globally to our common search for a better world.

As we are at the beginning on a brand new year I would like to single out the sixth and last item in the amateur code "The Radio Amateur is Patriotic..... Their knowledge and their station are always ready for the service of their country and their community."

As the SARL we have lived up to the amateur code as clearly demonstrated through the activity of our disaster communication division "HAMNET" and the many amateurs who freely give of their time and expertise to support it.

On 18 April this year, the world celebrates world amateur radio day with the theme "Amateur Radio - entering its second century of disaster communication."

We believe it is fitting that we dedicate the next four months to support the theme and to celebrate a century of disaster communication support to South Africa and, indeed many times, to countries far beyond our borders.

ICASA has issued call sign ZS9DCC "ZS9 Disaster Communication Centenary" and I would like to invite clubs to take turns in setting up public event stations to demonstrate how amateur radio contributes to South Africa and South Africans though disaster communication support, search and rescue operations, communication support for sporting events and technological innovation.

Amateur Radio was the first to use Voice over IP. Echolink was established many years before commercial operators introduced voice over IP in their networks. Radio amateurs build and operate satellites, have developed sophisticated software to enable communication under weak signal conditions and share these experiences to develop a culture of technological advancement.

The SARL will soon have a brochure available that demonstrates our abilities in providing disaster communication and technological advancements in communication. We need you to show it to the world " $\frac{1}{2}$





Active Elements

Kelvin Marsh, MOAID, is bringing together resources for disabled radio amateurs in a new web site to be found at www.active-elements.org. Working with Quentin, GW3BV, and Chris, G5VZ, Kelvin is publishing accessibility evaluations of amateur radio equipment, spoken word manuals and audio demonstrations

Kelvin says, "Blind and partially sighted radio amateurs often use standard equipment that might easily seem impossible to operate. They can be incredibly resourceful but do need to be informed about what is available. Amateurs with other disabilities also need to know if equipment is accessible or whether adaptations are available to make it so. Active Elements attempts to draw together experience and knowledge gained by disabled operators from all over the world and make it available to anyone with an interest."

Kelvin's team began work on the site during last autumn, building a range of evaluations, reviews and recordings plus links to resources available on other sites. The site is fully accessible and combines an attractive visual design with clear text while also being optimised for screen reader software like Window-Eyes or NVDA.

Development of the site continues and the formal launch of Active Elements is planned for 1 March 2013.



1 – New Year's Day 9 – Inland schools open 12 and 13 – Hunting Lions in the

14 – ZS4BS returns to his place of work

15 - Last day to provide feedback on the Draft National Radio Frequency Plan to <u>sarlregwg@sarl.org.za</u>

16 – Coastal schools open 18 to 20 – PEARS National VHF/UHF contest

19 – Wild Flower Day, Chrissiemeer

26 – Summer QRP Sprint

26 – Draf and Trap Night Race, Ottosdal

31 - Last day for submission of nominations for councillors for the next term and motions for the 2013 AGM

31 - Last day for submission of a brief outline of a proposed paper at the SA AMSAT Space Symposium on 18 May 2013 to <u>saam-</u> <u>sat@sarl.org.za</u>

Logbook of the World Processing Speed Increases Thanks to New Hardware

The processing queue for Logbook of The World (<u>LoTW</u>) - the ARRL's online log processing system - has been shrinking steadily since Monday 7 January, when the system was brought back online after the completion of previously announced maintenance involving the installation of a new database server equipped with solid state drives (SSDs).



International Museums Weekend special event 2013

Many radio clubs took part in the International Museums Weekend special event in 2012. In 2013, this event will take place on the double weekends of 15 and 16 and 22 and 23 June. Radio amateurs are encouraged to participate in this event by setting up stations in their local museums.

Organiser Harry, M1BYT, asks that all those intending to take part in the event should register their museum via the web form on the website www.ukradioamateur.co.uk/imw

30 M Beacon





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In HF Happenings 538, I mentioned about a 30 metre beacon from Italy. I received an e-mail from Tom, LA4LN, the HF Traffic Manager of the NRRL.

Hello Dennis,

With regard to the message you brought about the new Italian 30 m beacon (IZ3NYT), it would be useful if you also would bring in your publication the IARU views on such beacons. [Ref. your excellent publication "HF Happenings" No. 538, January 2013, page 2].

The IARU Region 1 Resolution DV05 C4 Rec 08 says that beacons in the 7 and 10 MHz bands are discouraged. The main reason for banning 10 MHz beacons is that "it was imperative not to cause interference to the primary user" (citation from minutes of the Friedrichshafen 2006 IARU Region 1 Interim Meeting; radio amateurs only have secondary user status in the 30 MHz band). For the same reason, contests are discouraged in the 30 m band (HF Managers' Handbook, Ch. 8.1, Subchapter 8).

The present IARU band plan says in general about unmanned transmitting stations: IARU member societies are requested to limit this activity on the HF bands. It is recommended that any unmanned transmitting stations on HF shall only be activated under operator control except for beacons agreed with the IARU Region 1 beacon coordinator, or specially licensed experimental stations. The term "automatically controlled data stations" includes Store and Forward stations.

I therefore suggest that the Italian Society asks IZ3NYT to stop his beacon on 10 138.5 kHz.

NRRL has also stopped beacons in our country by referring to the IARU recommendations. NRRL brought up the situation of unrecommended activities in the 30 MHz band under "Any Other Business" at the last IARU Region 1 Conference (South Africa 2011), Session C4. NRRL is working on a paper on this situation, with the intent to submit it to the IARU Region 1 Interim Meeting in Vienna in April.

73 from Tom, LA4LN

African DX

South Sudan. Ken, K4ZW, is currently active from Juba, Republic of South Sudan, as Z81Z. The length of his stay is unknown at this time. He is actove on 80 to 10 m CW. QSL via home call, direct, also LoTW.

Senegal and Guinea-Bissau. Once again Peter, HA3AUI, is returning to West Africa between 17 January and 10 March 2013. Look for him to be active from Casamance, Senegal, as 6W2SC and from Varela, Guinea-Bissau as J5UAP during this period. Possible IOTA activity too. QSL via HA3AUI, direct only. Website cqafrica.net/

Senegal and Guinea-Bissau. Operators Steve, HAODU, and Laci, HAONAR, plan to be on an African tour to Guinea Bissau (J5) and Senegal (6V) starting next month and to be active as J5NAR and 6V2R. They will start their journey in Cabrousse, South-Senegal. From there they will drive to Guinea-Bissau and expect to be on the air around 9 February. Additionally, they also plan to activate, in February, Carabane Island (AF-078) with the call sign 6V2R/P and Jeta Island (AF-093) with J5NAR/P.

On their QRZ.com page they state, "We would like to remind you that the entire trip and stay on islands is paid in full by each of the operators and that any contribution/support will help us to reduce the high logistical costs." Their PayPal account is hacmail.com.





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QSL for both J5NAR and 6V2R go to Laci, HAONAR, direct or by the Bureau. For details and updates, watch the Web page at http://www.haOnar.hu

African Islands

Reunion Island. Pierre, F8APV, and Stephane, F8EOI, will be returning to Reunion Island (AF-016, DIFO FR-001, WFF FFF-011, WLOTA 1812) and operating as FR/F8APV and FR/F8EOI between 21 January and 8 February 2013. They will be active on 40 metres and up with a Buddipole antenna system, longer than standard with telescopic long whip. Special attention on 30 metres CW and 20 metre SSB. Possible skeds welcome at pierre.goasquen.f8apv@gmail.com

Special Event Stations

Germany. Award "Deutsche Rosenschau 2013." The Deutsche Amateur Radio Club e.V., local group Forst/Lausitz, DOK Y27, offers the short term award "Deutsche Rosenschau 2013" ("German Rose exhibition") for amateur radio contacts within the year 2013 on the occasion of the 100^{th} jubilee of the Rose Garden Forst ("Ostdeutscher Rosengarten Forst"). The exhibition takes place from 14 June to 29 September in Forst (Lausitz).

http://www.darc.de/distrikte/y/27/diplomdeutsche-rosenschau-2013/

Germany. DB100AWPB is a special call sign issued for the 100th anniversary of the "Ausbesserungswerk Paderborn" of the German Railway. The call sign will be active during the entire year on 160 m to 70 cm using CW, SSB, RTTY, PSK and FM. QSL via DO6NIK direct (Clublog OQRS) and LoTW. Website www.grz.com/db/DB100AWPB

Puerto Rico. Special event call sign N4D will be active from 11 to 25 January 2013 for the ARRL Puerto Rico State Convention www.arrlpr.org/, Hatillo, Puerto Rico (NA-099, USi PR006S, WLOTA 2802). QSL via WP4CRG. During the convention, on 26 and 27 January, look for the official ARRL amateur radio station to be active as W1AW/KP4.

Russia. In 1613, Mikhail I Fyodorovich became the first Russian Tsar of the house of Romanov. His reign marked the end of the Time of Troubles, the Reestablishment of the Russian State and the Ascension of the House of Romanoff to the Russian Throne. Throughout the year 2013, the Pushkino Radio Club (RK3DWA) will put the special call sign R400DR on the air to remember Michael I. QSL via RN3DG. Website www.imperialhouse.ru/

Russia. The shooting club "Sniper" in Vologda (RDA VO-01), Russia, celebrates its 60^{th} jubilee with the special event station R60SKV, which will be active on all bands and modes until October 2013. QSL via RA1QD.

Italy. The Extreme DX & Contest Group will use special call sign II3CV between 12 January and 12 February 2013 to celebrate the Carnival of Venice. QSL via IK3HHX, direct or bureau. Information on the relevant award can be found at www.extremegroup.org/

Austria. Every Austrian amateur radio operator has a chance to operate with the special call sign OE2013(xxx) (their own suffix) between 15 January and 18 February 2013. Activity is to celebrate the Alpine Ski World Championships 2013 taking place in Schladming. An award is available for three different classes (Gold, Platinum and Diamond). Each class requires a certain number of special event stations and OE stations logged. Each special event station or OE station will only count once on each band. All bands and the below listed modes may be used; the





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only exception Packet radio and Echo Link contacts do not count. The award may be worked in the following modes: CW, SSB, Digital, Mixed and QRP (max. 10 Watts). For complete details, visit: wmdiplom2013.oevsv.at/

Poland. Janusz, SP9YI, reports that he will be active from Mierzecice, Poland, as HFOA (WAP-237) from 15 January to 28 February 2013 and in particular during 10th AAW (18 to 24 February). QSL via SP9YI. Janusz already holds WAP-215 for HF36POL and WAP-216 for HF35APAS for past activities and now he got WAP-237, for HFOA. It counts for the ARCTOWSKI Antarctic Award Program www.piekary.com.pl/aaa. List of participants for the 10th AAW is hosted and updated regularly on the WAP website www.waponline.it/.

Other DX

Contest Calendar

This week's contests compiled by Bruce Horn, WA7BNM. The period covered is 7 to 14 January 2013.

ARS Spartan Sprint

02:00 - 04:00 UTC 8 January

Mode: CW

Bands: 80, 40, 20, 15, 10 m Classes: Skinny; Tubby Max power: 5 watts

Exchange: RST, state, province or country and power

Work stations: Once per band Submit logs by: 10 January 2013

E-mail logs to: spartansprint@yahoo.com

Mail logs to: (none)

Find rules at: http://www.arsqrp.blogspot.com/

QRP Fox Hunt

02:00 - 03:30 UTC 9 January

Mode: CW

Bands: 40 m Only

Classes: Single Op (Fox/Hound)

Max power: 5 watts

Exchange: RST, state, province or country, name and power output

QSO Points: 1 point per QSO

Multipliers: (none)

Score Calculation: Total score = total QSO points Submit logs by: 03:30 UTC 10 January 2013

E-mail logs to: (see rules)
Mail logs to: (none)

Find rules at: http://www.grpfoxhunt.org/winter_rules.htm

CWops Mini-CWT Test

13:00 - 14:00 UTC 9 and 19:00 - 20:00 UTC 9 January and 03:00 - 04:00 UTC 10 January

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m







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Classes: Single Op - QRP, low or high

Max power: HP: >100 watts; LP: 100 watts; QRP: 5 watts

Exchange: Member: Name and member no; non-Member: Name and state, province or country

Work stations: Once per band QSO Points: 1 point per QSO Multipliers: Each call once

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 04:00 UTC 12 January 2013

Post log summary at: http://www.hornucopia.com/3830score/

Mail logs to: (none)

Find rules at: http://www.cwops.org/onair.html

QRP Fox Hunt

02:00 - 03:30 UTC 11 January

Mode: CW Bands: 80 m Only

Classes: Single Op (Fox/Hound)

Max power: 5 watts

Exchange: RST, state, province or country, name and power output

QSO Points: 1 point per QSO

Multipliers: (none)

Score Calculation: Total score = total QSO points Submit logs by: 03:30 UTC 12 January 2013

E-mail logs to: (see rules)
Mail logs to: (none)

Find rules at: http://www.grpfoxhunt.org/winter_rules.htm

NCCC Sprint Ladder

02:30 - 03:00 UTC 11 January

Mode: CW

Bands: 160, 80, 40, 20, 15 m

Classes: Single Op Max power: 100 watts Exchange: (see rules)

Work stations: Once per band

QSO Points: NA station: 1 point per QSO; non-NA station: 1 point per QSO with an NA station Multipliers: Each US state (including KL7 and KH6) once per band; Each VE province once per

band; Each North American country (except W/VE) once per band Score Calculation: Total score = total QSO points x total mults

Submit logs by: 13 January 2013

E-mail logs to: (none)

Post log summary at: http://www.hornucopia.com/3830score/

Mail logs to: (none)

Find rules at: http://www.ncccsprint.com/rules.html

Old New Year Contest

05:00 - 09:00 UTC 12 January

Mode: CW, SSB

Bands: 80, 40, 20, 15, 10 m







Classes: Single Op CW, SSB or mixed low or high; Single Op on Air >50 Years low or high; Single

Op Age and Experience >100 Years low or high; Multi-Op low or high; SWL

Exchange: RST and sum of operator age and years on the air

Work stations: Once per band per mode QSO Points: Copied age and experience

Multipliers: (none)

Score Calculation: Total score = total QSO points

Submit logs by: 27 January 2013 E-mail logs to: contest@radio.ru

Mail logs to: (none)

Find rules at: http://www.radio.ru/cg/contest/rule-results/index7.shtml

SKCC Weekend Sprintathon

12:00 UTC 12 January to 24:00 UTC 13 January

Mode: CW

Bands: 160, 80, 40, 20, 15, 10, 6 m

Classes: (none)

Max operating hours: 24

Exchange: RST, name, state, province or country and SKCC no or "NONE"

Work stations: Once per band QSO Points: 1 point per QSO Bonus Points: (see rules)

Multipliers: Each state, province or country once

Score Calculation: Total score = (total QSO points x total mults) and bonus points

Submit logs by: 20 January 2013

Post log summary at: http://wes.m0trn.com/submission.php

Mail logs to: (none)

Find rules at: http://www.skccgroup.com/operating_activities/weekend_sprintathon/

MI QRP January CW Contest

12:00 UTC 12 January to 23:59 UTC 13 January

Mode: CW

Bands: 160, 80, 40, 20, 15, 10, 6 m

Classes: 250 mW; 250 mW - 1 W; 1 - 5 W; >5 W

Exchange: Members: RST, state, province or country and membership no; non-Members: RST,

state, province or country and power output

Work stations: Once per band

QSO Points: 5 points per QSO with members; 2 points per QSO with non-member W/VE sta-

tions; 4 points per QSO with non-member DX stations Multipliers: Each state, province or country, once per band

Bonus: multiply total points by 1.25 if xmtr or receiver is homebrew; Bonus: multiply total points

by 1.5 if both xmtr and receiver are homebrew

Score Calculation: Total score = bonus multiplier x total QSO points x total mults

Submit logs by: 12 February 2013 E-mail logs to: n8xx@arrl.net

Mail logs to: Hank Greeb, N8XX, 5727 11 Mile Rd. NE, Rockford, MI 49341, USA

Find rules at: http://www.qsl.net/migrpclub/contest.html

UK DX BPSK63 Contest

12:00 UTC 12 January to 11:59 UTC 13 January





Mode: BPSK63

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op low or high; Multi-Single Max power: HP: 100 watts; LP: 10 watts Exchange: RSQ and 4-digit DXDA number

Work stations: Once per band

Q50 Points: UK station: 1 point per Q50

non-UK station: 1 point per QSO with non-UK station; non-UK station: 3 points per QSO with UK

station

Multipliers: Each DXDA territory once

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 11:59 UTC 18 January 2013

E-mail logs to: (none)

Upload log at: http://ua9qcq.com/contests/submit_log_eng.php

Mail logs to: (none)

Find rules at: http://www.ukdx.srars.org/ukdxc-psk-rules-2013.pdf

WW PMC Contest

12:00 UTC 12 January to 12:00 UTC 13 January

Mode: CW, SSB

Bands: 80, 40, 20, 15, 10m

Classes: Single Op CW, SSB or mixed - Peace Messenger City or World - QRP, low or high;

Multi-Op CW, SSB or mixed - Peace Messenger City or World

Exchange: PMC: RS(T) and PMC abbreviation; World: RS(T) and CQ Zone

Work stations: Once per mode per band

Q50 Points: (see rules)

Multipliers: Each PMC once per mode per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 13 February 2013 E-mail logs to: pmc@s59dcd.si

Mail logs to: (none)
Find rules at:

http://www.s59dcd.si/en10/index.php?option=com_content&view=article&id=78&Itemid=92

North American CW Q50 Party

18:00 UTC 12 January to 05:59 UTC 13 January

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op (QRP/Low); Multi-Two (Low)

Max operating hours: Single Op: 10 hours; Multi-Two: 12 hours

Max power: LP: 100 watts; QRP: 5 watts

Exchange: NA: Name and state, province or country; non-NA: Name

Work stations: Once per band

QSO Points: NA station: 1 point per QSO; non-NA station: 1 point per QSO with an NA station

Multipliers: Each US state (including KH6/KL7) once per band

Each VE province/territory once per band; Each North American country (except W/VE) once

per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 20 January 2013

E-mail logs to: (none)







Upload log at: http://www.ncjweb.com/nagplogsubmit.php

Mail logs to: Chris Hurlbut, KL9A, 1733 E. Broad Ave., Spokane, WA 99207, USA

Find rules at: http://www.ncjweb.com/nagprules.php

NRAU-Baltic CW Contest 06:30 - 08:30 UTC 13 January

Mode: CW Bands: 80, 40 m

Classes: Single Op low or high; Multi-Op Max power: HP: >100 watts; LP: 100 watts Exchange: RST, serial no and 2-letter region

Work stations: Once per band QSO Points: 2 points per QSO

Multipliers: Each region, once per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 20 January 2013 E-mail logs to: nrau@erau.ee

Mail logs to: (none)

Find rules at: http://www.nrau.net/nrau-baltic-contest/rules.html

DARC 10-Metre Contest

09:00 - 10:59 UTC 13 January

Mode: CW, SSB Bands: 10 m Only

Classes: DL Single Op CW low or high; DL Single Op Mixed low or high; non-DL Single Op CW;

non-DL Single Op Mixed

Max power: HP: >100 W; LP: 100 W

Exchange: DL: RS(T), QSO no and DOK; non-DL: RS(T) and QSO no

Work stations: Once only QSO Points: 1 point per QSO

Multipliers: Each WAE/DXCC country once; Each DOK once Score Calculation: Total score = total QSO points x total mults

Submit logs by: 28 January 2013 E-mail logs to: 10m@dxhf.darc.de

Mail logs to: (none)

Find rules at: http://www.darc.de/referate/dx/contest/10m/en/rules/

NRAU-Baltic SSB Contest 09:00 - 11:00 UTC 13 January

Mode: SSB Bands: 80, 40 m

Classes: Single Op low or high; Multi-Op Max power: HP: >100 watts; LP: 100 watts Exchange: RS, serial no and 2-letter region

Work stations: Once per band QSO Points: 2 points per QSO

Multipliers: Each region, once per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 20 January 2013 E-mail logs to: nrau@erau.ee





Mail logs to: (none)

Find rules at: http://www.nrau.net/nrau-baltic-contest/rules.html

NAQCC-EU Monthly Sprint
18:00 - 20:00 UTC 14 January

Mode: CW

Bands: 80, 40, 20 m

Classes: Single Op Simple Wire Antenna; Single Op Gain Antenna

Max power: 5 watts

Exchange: RST, country and NAQCC no or power

Work stations: Once per band

QSO Points: 1 point per QSO with non-member; 2 points per QSO with member

Multipliers: Each country in Europe; First country in each continent worked other than Europe

Key Type Mult: $2 \times if$ straight key, $1,5 \times if$ bug, $1 \times if$ other

Score Calculation: Total score = total QSO points x total mults x key type mult

Submit logs by: 20:00 UTC 17 January 2013

Upload log at: http://nagcc-eu.org/eu-sprints/submit-your-log

Mail logs to: (none)

Find rules at: http://nagcc-eu.org/sprints/NagccEuSprintRulesDec2012.pdf

Next Week's Contests

QRP Fox Hunt, 02:00 - 03:30 UTC 16 January

AWA Linc Cundall Memorial CW Contest, 23:00 UTC 16 January to 23:00 UTC 17 January and 23:00 UTC 19 January to 23:00 UTC 20 January

NAQCC Straight Key/Bug Sprint, 01:30 - 03:30 UTC 17 January

PEARS National VHF/UHF Contest, 16:00 UTC 18 January to 12:00 UTC 19 January and 12:01

UTC 19 January to 10:00 UTC 20 January

QRP Fox Hunt, 02:00 - 03:30 UTC 18 January

NCCC Sprint Ladder, 02:30 - 03:00 UTC 18 January

Feld Hell Sprint, 00:00 - 24:00 UTC 19 January

LZ Open Contest, 00:00 - 04:00 UTC 19 January

YL-ISSB QSO Party, SSB, 00:00 UTC 19 January to 23:59 UTC 20 January

Hungarian DX Contest, 12:00 UTC 19 January to 11:59 UTC 20 January

North American QSO Party, SSB, 18:00 UTC 19 January to 05:59 UTC 20 January

Run for the Bacon QRP Contest, 02:00 - 04:00 UTC 21 January

History This Week

A look back at events that made history this week - compiled by the Summerland Amateur Radio Club of Lismore, NSW and Dennis, ZS4BS. The week starting Monday 7 January 2013

1404 - English alchemists were forbidden to use their knowledge to create precious metals

1759 - The British Museum, in Bloomsbury, London, the world's oldest public national museum, opened

1799 - Income Tax (temporary) introduced in the UK at 10% to pay for the Napoleonic Wars

1816 - Sir Humphry Davy's safety lamp was first used in a coalmine.

1820 - Stainless steel invented by a French metallurgist

1878 - The first demonstration of Alexander Graham Bell's telephone to Queen Victoria at her Osborne House estate on the Isle of Wight





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- 1894 "Edison Kinetoscopic Record of a Sneeze" released in movie theatres
- 1906 First radio set advertised (Telimco for \$7.50 in Scientific American) claimed to receive signals up to one mile
- 1907 A US patent for the three-element vacuum tube was issued to its inventor, Dr Lee de Forest
- 1908 A wireless message was sent long-distance for the first time from the Eiffel Tower in Paris
- 1914 Henry Ford introduces assembly line, for T-Fords
- 1929 First TV broadcast in Australia by Gil Miles and Donald Macdonald in Melbourne from radio station 3UZ

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